

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) ~~Device~~ A device for making a material collide in a rotating system, comprising:

- a rotor which can rotate about a central axis of rotation in clockwise direction, here called forward, as well as in anti-clockwise direction, here called backward;

- ~~at least one~~ a forward guide member, which is supported by ~~[[the]]~~ said rotor and is provided with a forward directed guide face with an inner and an outer edge, for accelerating and guiding a stream of the ~~[[said]]~~ material which, in a region close to ~~[[the]]~~ said axis of rotation, is metered on ~~[[the]]~~ said rotor, ~~which~~ said forward guide member ~~extends~~ extending in the direction of the external edge of ~~[[the]]~~ said rotor, which material comes off the said forward guide member and is ~~[[send]]~~ sent into a backward spiral stream (Sb), when rotating forward and when seen from a viewpoint which moves together with ~~[[the]]~~ said forward guide member;

- ~~at least one~~ a backward guide member, which is supported by ~~[[the]]~~ said rotor and is at least provided with a backward directed guide face with an inner and an outer edge, for accelerating and guiding a stream of the ~~[[said]]~~ material which,

in a region close to [[the]] said axis of rotation, is metered on [[the]] said rotor, ~~which said backward~~ guide member ~~extends~~ extending in the direction of the external edge of [[the]] said rotor, which material comes off [[the]] said backward guide member and is [[send]] sent into a forward spiral stream (Sf), when rotating backward and when seen from a viewpoint which moves together with [[the]] said backward guide member;

- ~~at least one~~ a forward impact unit which is supported by [[the]] said rotor and is linked with [[the]] said forward guide member and ~~consists of at least one~~ includes a forward impact member which is provided with a forward directed impact face, which is associated with [[the]] said forward guide member for simultaneously loading and accelerating the [[said]] stream of material on impact when rotating forward, ~~which said~~ forward directed impact face lies entirely behind, when seen in the direction of rotation, the radial line on which is situated the location where the [[said]] as yet uncollided stream of material leaves [[the]] said forward guide member, and at a greater radial distance from [[the]] said axis of rotation than the location at which the [[said]] as yet uncollided stream of material leaves [[the]] said forward guide member, the position of ~~which said~~ forward impact face is determined by the forward ~~synchronisation~~ synchronization angle ( $\theta_f$ ) between the radial line on which is situated the location where the [[said]] as yet uncollided stream of material leaves [[the]] said forward guide member and the

radial line on which is situated the location where [[the]] said backward spiral stream (Sb) of the [[said]] as yet uncollided stream of material and the forward path (Cf) of [[the]] said forward impact face intersect one another, ~~which~~ said forward ~~synchronisation~~ synchronization angle ( $\theta_f$ ) is selected in such a manner that the arrival of the [[said]] as yet uncollided material at the location where [[the]] said backward spiral stream (Sb) and [[the]] said forward path (Cf) intersect one another is synchronized with the arrival at the same location of [[the]] said forward impact face, ~~which~~ said forward impact face is directed virtually transversely, when seen in the plane of the rotation, to [[the]] said backward spiral stream (Sb) which the [[said]] as yet uncollided material describes, when seen from a viewpoint which moves together with [[the]] said forward impact member;

- ~~at least one~~ a backward impact unit which is supported by [[the]] said rotor and is linked with [[the]] said backward guide member and ~~consists of at least one~~ includes a backward impact member which is provided with a backward directed impact face, which is associated with [[the]] said backward guide member for simultaneously loading and accelerating the [[said]] stream of material on impact when rotating backward, ~~which~~ said backward directed impact face lies entirely behind, when seen in the direction of rotation, the radial line on which is situated the location where the [[said]] as yet uncollided stream of

material leaves [[the]] said backward guide member, and at a greater radial distance from [[the]] said axis of rotation than the location at which the [[said]] as yet uncollided stream of material leaves [[the]] said backward guide member, the position of ~~which~~ said backward impact face is determined by the backward ~~synchronisation~~ synchronization angle ( $\theta_b$ ) between the radial line on which is situated the location where the [[said]] as yet uncollided stream of material leaves [[the]] said backward guide member and the radial line on which is situated the location where [[the]] said forward spiral stream ( $S_f$ ) of the [[said]] as yet uncollided stream of material and the backward path ( $C_b$ ) of [[the]] said backward impact face intersect one another, ~~which~~ said backward ~~synchronisation~~ synchronization angle ( $\theta_b$ ) is selected in such a manner that the arrival of the [[said]] as yet uncollided material at the location where [[the]] said forward spiral stream ( $S_f$ ) and [[the]] said backward path ( $C_b$ ) intersect one another is synchronized with the arrival at the same location of [[the]] said backward impact face, ~~which~~ said backward impact face is directed virtually transversely, when seen in the plane of the rotation, to [[the]] said forward spiral stream ( $S_f$ ) which the [[said]] as yet uncollided material describes, when seen from a viewpoint which moves together with [[the]] said backward impact member[[:]] in such a way that [[the]] said forward directed second spiral stream does not interfere with any of the forward directed impact faces.

2. (currently amended) ~~Device~~ The device according to claim 1, ~~having~~ wherein,

[[ - the]] said forward impact unit ~~being~~ is provided with at least two of the forward impact members, which each have a forward impact face that can be individually associated with [[the]] said forward guide member[[:]], and

[[ - the]] said backward impact unit ~~being~~ is provided with at least two of the backward impact members, which each have a backward impact face that can be individually associated with [[the]] said backward guide member.

3. (currently amended) ~~Device~~ The device according to claim 2, [[the]] wherein said individual associations ~~being~~ are achieved by changing at least the position of [[the]] a respective said guide face of [[the]] one of said forward and backward guide ~~member~~ members.

4. (currently amended) ~~Device~~ The device according to claim 2, [[the]] wherein said individual associations ~~being~~ are achieved by changing at least the position of [[the]] a respective said impact face of [[the]] one of said forward and backward impact ~~member~~ members.

5. (currently amended) ~~Device~~ The device according to claim 1, having a configuration of:

[[ -]] at least two similar ones of said forward impact ~~units~~ unit being circumferentially disposed uniformly at equal angular distances around [[the]] said axis of rotation; and

[[~~-~~]] ones of the backward impact units unit, in number equal to the forward impact units, being circumferentially disposed uniformly at equal angular distances around [[~~the~~]] said axis of rotation.

6. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with each ~~of the~~ said forward guide ~~members~~ member arranged together with a said backward guide member, as an arranged pair next to each other, virtually completely joined together back to back, as [[~~a~~]] an adjacent guide combination.

7. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with each ~~of the~~ said forward guide ~~members~~ member arranged together with a said backward guiding member, as an arranged pair next to each other, virtually partly joined together back to back, with the respective inner sections positioned close to each other, with the outer sections positioned at further distance from each other than said inner sections, as an inner guide combination.

8. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with each ~~of the~~ said forward guide ~~members~~ member arranged together with a said backward guiding member, as an arranged pair next to each other, virtually partly joined together back to back, with the respective outer sections positioned close to each other, with

the inner sections positioned at further distance from each other than said outer sections, as an outer guide combination.

9. (currently amended) ~~Device~~ The device according to claim 6, having ~~[[the]]~~ said backward guide face of ~~[[the]]~~ said guide combination functioning as a forward pre-guide face when rotating forward, and vice versa when rotating backward.

10. (currently amended) ~~Device~~ The device according to claim 8, having a pre-guide member positioned essentially symmetrically between said inner sections, which pre-guide member is provided with a pre-guide face for pre-guiding of the material, with ~~[[the]]~~ said pre-guide face functioning forward when rotating forward, and vice versa when rotating backward.

11. (currently amended) ~~Device~~ The device according to claim ~~[[5]]~~ 7, with ~~[[the]]~~ said guide combination being ~~movable~~ movably supported by ~~[[the]]~~ said rotor in such a way that ~~[[the]]~~ said guide combination can be positioned into forward and backward ~~position~~ positions.

12. (currently amended) ~~Device~~ The device according to claim 11, with ~~[[the]]~~ said guide ~~combinations~~ combination being movable around a first point at a location essentially between said combined guide members.

13. (currently amended) ~~Device~~ The device according to claim 12, with ~~[[the]]~~ said guide ~~combinations~~ combination being pivotly attached to ~~[[the]]~~ said rotor a first pivot at a location essentially between said combined guide members.

14. (currently amended) ~~Device~~ The device according to claim 13, with the radial distance between [[the]] said axis of rotation and the point of gravity of [[the]] said pivotly attached guide combination being smaller then the equal radial distance to the location of [[the]] said first pivot, in such a way that [[the]] said pivotly attached guide combination is self-positioning, which is achieved by having the guide combination tumble automatically into forward and backward ~~position~~ positions when the direction of rotation is reversed from forward into backward and visa versa.

15. (currently amended) ~~Device~~ The device according to claim 11, with [[the]] said guide combinations being manually adjustable attached to [[the]] said rotor at a location essentially between said combined guide members.

16. (currently amended) ~~Device~~ The device according to claim 1, [[the]] said guide faces being not of straight design at least in longitudinal direction.

17. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with ~~each-of-the~~ said forward impact ~~members~~ member arranged together with a said backward impact member, as an arranged pair next to each other, virtually completely joined together back to back, as [[a]] an adjacent impact combination.

18. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with ~~each-of-the~~ said



forward impact ~~members~~ member arranged together with a said backward impact member, as an arranged pair next to each other, virtually partly joined together back to back, with the respective inner sections positioned close to each other, with the outer sections positioned at further distance from each other than said inner sections, as an inner impact combination.

19. (currently amended) ~~Device~~ The device according to claim 5, the configuration being symmetric with ~~each of the~~ said forward impact ~~members~~ member arranged together with a said backward impact member, as an arranged pair next to each other, virtually partly joined together front to front, with the respective outer sections positioned close to each other, with the inner sections positioned at further distance from each other than said outer sections, as an outer impact combination.

20. (currently amended) ~~Device~~ The device according to claim 19, the impact faces of ~~[[the]]~~ said outer impact combination being connected together at least along their bottom edges with a plate, in such a way that a bed of own material can be formed on said plate between said impact faces, which said bed acts as an autogenous impact face.

21. (currently amended) ~~Device~~ The device according to claim 17, with ~~[[the]]~~ said impact combination being ~~movable~~ movably supported by ~~[[the]]~~ said rotor in such a way that ~~[[the]]~~ said impact combination can be positioned into forward and backward ~~position~~ positions.

22. (currently amended) ~~Device~~ The device according to claim 21, with ~~[[the]]~~ said impact ~~combinations~~ combination being movable around a second point at a location essentially between said combined impact members.

23. (currently amended) ~~Device~~ The device according to claim 22, with ~~[[the]]~~ said impact ~~combinations~~ combination being pivotly attached to ~~[[the]]~~ said rotor at a second pivot at a location essentially between said combined impact members.

24. (currently amended) ~~Device~~ The device according to claim 23, with the radial distance between ~~[[the]]~~ said axis of rotation and the point of gravity of ~~[[the]]~~ said pivotly attached impact combination being smaller then the equal radial distance to the location of ~~[[the]]~~ said second pivot, in such a way that ~~[[the]]~~ said pivotly attached impact combination is self-positioning, which is achieved by having the impact combination tumble automatically into forward and backward ~~position~~ positions when the direction of rotation is reversed from forward into backward and visa versa.

25. (currently amended) ~~Device~~ The device according to claim 21, with ~~[[the]]~~ said impact ~~combinations~~ combination being manually adjustable attached to ~~[[the]]~~ said rotor at a location essentially between said combined impact members.

26. (currently amended) ~~Device~~ The device according to claim 5, ~~[[the]]~~ said impact faces being not of straight design at least in longitudinal direction.

27. (currently amended) ~~Device~~ The device according to claim 5, having a super-symmetric configuration:

[[ - ]] with [[ the ]] said forward and ~~the said~~ backward guide members being arranged together as guide combinations; and

[[ - ]] with [[ the ]] said forward and ~~the said~~ backward impact members being arranged together as impact combinations.

28. (currently amended) ~~Device~~ The device according to claim 1, having a hollow impact ring which has a trough structure which is at least partly open along the side facing [[ the ]] said axis of rotation, which circular hollow impact ring is supported by said rotor and is located concentrically around [[ the ]] said axis of rotation at a greater radial distance from said axis of rotation than the outer edge of said guide member, in which trough structure a co-rotating autogenous bed of own material is formed.

29. (currently amended) ~~Device~~ The device according to claim 28, with [[ the ]] said impact ring having at least one opening for discharging of the material

30. (currently amended) ~~Device~~ The device according to claim 28, with at least one said impact unit being positioned in said impact ring.

31. (currently amended) ~~Device~~ The device according to claim 1, with at least one circular hollow balance ring attached to [[ the ]] said rotor, the ~~centre~~ center of which said circular balance ring coincides with [[ the ]] said axis of rotation, ~~which~~

said hollow balance ring is at least partly filled with oil and contains at least one ball for reducing vibration of [[the]] said rotor.

32. (currently amended) ~~Device~~ The device according to claim 31, with [[the]] said at least one ball being composed of a metal alloy.

33. (currently amended) ~~Device~~ The device according to claim 31, with [[the]] said at least one ball being composed of ceramic material.